

SEQUENCE LISTING

<110> Schor, Seth Lawrence
Schor, Ana Marie

<120> Polypeptides, Polynucleotides, and Uses
Thereof

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			165						170					175		
Glu	Thr	Gly	Gly	Tyr	Met	Leu	Glu	Cys	Val	Cys	Leu	Gly	Asn	Gly	Lys	
		180						185					190			
Gly	Glu	Trp	Thr	Cys	Lys	Pro	Ile	Ala	Glu	Lys	Cys	Phe	Asp	His	Ala	
	195						200					205				
Ala	Gly	Thr	Ser	Tyr	Val	Val	Gly	Glu	Thr	Trp	Glu	Lys	Pro	Tyr	Gln	
	210					215					220					
Gly	Trp	Met	Met	Val	Asp	Cys	Thr	Cys	Leu	Gly	Glu	Gly	Ser	Gly	Arg	
225				230						235					240	
Ile	Thr	Cys	Thr	Ser	Arg	Asn	Arg	Cys	Asn	Asp	Gln	Asp	Thr	Arg	Thr	
			245						250					255		
Ser	Tyr	Arg	Ile	Gly	Asp	Thr	Trp	Ser	Lys	Lys	Asp	Asn	Arg	Gly	Asn	
		260					265					270				
Leu	Leu	Gln	Cys	Ile	Cys	Thr	Gly	Asn	Gly	Arg	Gly	Glu	Trp	Lys	Cys	
	275						280					285				
Glu	Arg	His	Thr	Ser	Val	Gln	Thr	Thr	Ser	Ser	Gly	Ser	Gly	Pro	Phe	
	290					295					300					
Thr	Asp	Val	Arg	Ala	Ala	Val	Tyr	Gln	Pro	Gln	Pro	His	Pro	Gln	Pro	
305				310						315					320	
Pro	Pro	Tyr	Gly	His	Cys	Val	Thr	Asp	Ser	Gly	Val	Val	Tyr	Ser	Val	
			325						330					335		
Gly	Met	Gln	Trp	Leu	Lys	Thr	Gln	Gly	Asn	Lys	Gln	Met	Leu	Cys	Thr	
		340					345					350				
Cys	Leu	Gly	Asn	Gly	Val	Ser	Cys	Gln	Glu	Thr	Ala	Val	Thr	Gln	Thr	
	355						360					365				
Tyr	Gly	Gly	Asn	Ser	Asn	Gly	Glu	Pro	Cys	Val	Leu	Pro	Phe	Thr	Tyr	
	370					375					380					
Asn	Gly	Arg	Thr	Phe	Tyr	Ser	Cys	Thr	Thr	Glu	Gly	Arg	Gln	Asp	Gly	
385				390						395					400	
His	Leu	Trp	Cys	Ser	Thr	Thr	Ser	Asn	Tyr	Glu	Gln	Asp	Gln	Lys	Tyr	
			405						410					415		
Ser	Phe	Cys	Thr	Asp	His	Thr	Val	Leu	Val	Gln	Thr	Gln	Gly	Gly	Asn	
		420					425					430				
Ser	Asn	Gly	Ala	Leu	Cys	His	Phe	Pro	Phe	Leu	Tyr	Asn	Asn	His	Asn	
	435						440					445				
Tyr	Thr	Asp	Cys	Thr	Ser	Glu	Gly	Arg	Arg	Asp	Asn	Met	Lys	Trp	Cys	
	450					455					460					
Gly	Thr	Thr	Gln	Asn	Tyr	Asp	Ala	Asp	Gln	Lys	Phe	Gly	Phe	Cys	Pro	
465				470						475					480	
Met	Ala	Ala	His	Glu	Glu	Ile	Cys	Thr	Thr	Asn	Glu	Gly	Val	Met	Tyr	
			485						490					495		
Arg	Ile	Gly	Asp	Gln	Trp	Asp	Lys	Gln	His	Asp	Met	Gly	His	Met	Met	
		500						505					510			
Arg	Cys	Thr	Cys	Val	Gly	Asn	Gly	Arg	Gly	Glu	Trp	Thr	Cys	Tyr	Ala	
	515						520					525				
Tyr	Ser	Gln	Leu	Arg	Asp	Gln	Cys	Ile	Val	Asp	Asp	Ile	Thr	Tyr	Asn	
	530					535					540					
Val	Asn	Asp	Thr	Phe	His	Lys	Arg	His	Glu	Glu	Gly	His	Met	Leu	Asn	

Gly	Glu	Trp	Thr	Cys	Lys	Pro	Ile	Ala	Glu	Lys	Cys	Phe	Asp	His	Ala
		195						185							
Ala	Gly	Thr	Ser	Tyr	Val	Val	Gly	Glu	Thr	Trp	Glu	Lys	Pro	Tyr	Gln
	210					215					220				
Gly	Trp	Met	Met	Val	Asp	Cys	Thr	Cys	Leu	Gly	Glu	Gly	Ser	Gly	Arg
225					230					235					240
Ile	Thr	Cys	Thr	Ser	Arg	Asn	Arg	Cys	Asn	Asp	Gln	Asp	Thr	Arg	Thr
				245					250					255	
Ser	Tyr	Arg	Ile	Gly	Asp	Thr	Trp	Ser	Lys	Lys	Asp	Asn	Arg	Gly	Asn
			260					265					270		
Leu	Leu	Gln	Cys	Ile	Cys	Thr	Gly	Asn	Gly	Arg	Gly	Glu	Trp	Lys	Cys
		275					280					285			
Glu	Arg	His	Thr	Ser	Val	Gln	Thr	Thr	Ser	Ser	Gly	Ser	Gly	Pro	Phe
	290					295					300				
Thr	Asp	Val	Arg	Ala	Ala	Val	Tyr	Gln	Pro	Gln	Pro	His	Pro	Gln	Pro
305					310					315					320
Pro	Pro	Tyr	Gly	His	Cys	Val	Thr	Asp	Ser	Gly	Val	Val	Tyr	Ser	Val
				325					330					335	
Gly	Met	Gln	Trp	Leu	Lys	Thr	Gln	Gly	Asn	Lys	Gln	Met	Leu	Cys	Thr
			340					345					350		
Cys	Leu	Gly	Asn	Gly	Val	Ser	Cys	Gln	Glu	Thr	Ala	Val	Thr	Gln	Thr
		355					360					365			
Tyr	Gly	Gly	Asn	Ser	Asn	Gly	Glu	Pro	Cys	Val	Leu	Pro	Phe	Thr	Tyr
	370					375					380				
Asn	Gly	Arg	Thr	Ser	Thr	Thr	Ser	Asn	Tyr	Glu	Gln	Asp	Gln	Lys	Tyr
385					390					395					400
Ser	Phe	Cys	Thr	Asp	His	Thr	Val	Leu	Val	Gln	Thr	Gln	Gly	Gly	Asn
				405				410					415		
Ser	Asn	Gly	Ala	Leu	Cys	His	Phe	Pro	Phe	Leu	Tyr	Asn	Asn	His	Asn
			420					425					430		
Tyr	Thr	Asp	Cys	Thr	Ser	Glu	Gly	Arg	Arg	Asp	Asn	Met	Lys	Trp	Cys
		435					440					445			
Gly	Thr	Thr	Gln	Asn	Tyr	Asp	Ala	Asp	Gln	Lys	Phe	Gly	Phe	Cys	Pro
	450					455					460				
Met	Ala	Ala	His	Glu	Glu	Ile	Cys	Thr	Thr	Asn	Glu	Gly	Val	Met	Tyr
465					470					475					480
Arg	Ile	Gly	Asp	Gln	Trp	Asp	Lys	Gln	His	Asp	Met	Gly	His	Met	Met
				485					490				495		
Arg	Cys	Thr	Cys	Val	Gly	Asn	Gly	Arg	Gly	Glu	Trp	Thr	Cys	Tyr	Ala
			500					505					510		
Tyr	Ser	Gln	Leu	Arg	Asp	Gln	Cys	Ile	Val	Asp	Asp	Ile	Thr	Tyr	Asn
		515					520					525			
Val	Asn	Asp	Thr	Phe	His	Lys	Arg	His	Glu	Glu	Gly	His	Met	Leu	Asn
	530					535					54				

Ser	Lys	Tyr	Ile	Leu	Arg	Trp	Arg	Pro	Val	Ser	Ile	Pro	Pro	Arg	Asn	
				645					650					655		
Leu	Gly	Tyr	Xaa	Val	Ser	Xaa	Ser	Gln	Phe	Xaa	Trp	Phe	Leu	Phe	Phe	
			660					665					670			
Pro	Ala	Phe	Glu	Pro	Thr	Thr	Leu	Ile	Asn	Tyr	Ser	Tyr	Ser	Ile	Tyr	
		675					680					685				
Tyr	Ile	Cys	Leu	Val	Asn	Lys	Gln	Tyr	Val	Val	Asn	Xaa	Ile	Asp		
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<400> 19
 Asn Leu Val Ala Thr Cys Leu Pro Val Arg Ala Ser Leu Pro His Arg
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 Leu Asn

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 <211> 31
 <212> PRT
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<400> 20
 Met Leu Arg Gly Pro Gly Pro Gly Leu Leu Leu Leu Ala Val Gln Cys
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 Leu Gly Thr Ala Val Pro Ser Thr Gly Ala Ser Lys Ser Lys Arg
 20 25 30

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<400> 21
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 Ser Lys Pro Gly
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 Thr Tyr Leu Gly Asn Ala Leu Val Cys Thr Cys Tyr Gly Gly Ser Arg
 20 25 30
 Gly Phe Asn Cys Glu Ser Lys Pro Glu Ala Glu Glu Thr

35

40

45

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<400> 23

Cys	Phe	Asp	Lys	Tyr	Thr	Gly	Asn	Thr	Tyr	Arg	Val	Gly	Asp	Thr	Tyr
1				5				10					15		
Glu	Arg	Pro	Lys	Asp	Ser	Met	Ile	Trp	Asp	Cys	Thr	Cys	Ile	Gly	Ala
			20				25					30			
Gly	Arg	Gly	Arg	Ile	Ser	Cys	Thr	Ile	Ala	Asn	Arg				
			35				40								

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<212> PRT

<213> Homo sapiens

<400> 24

Cys	His	Glu	Gly	Gly	Gln	Ser	Tyr	Lys	Ile	Gly	Asp	Thr	Trp	Arg	Arg
1				5				10					15		
Pro	His	Glu	Thr	Gly	Gly	Tyr	Met	Leu	Glu	Cys	Val	Cys	Leu	Gly	Asn
			20				25					30			
Gly	Lys	Gly	Glu	Trp	Thr	Cys	Lys	Pro	Ile	Ala	Glu	Lys			
			35				40					45			

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<212> PRT

<213> Homo sapiens

<400> 25

Cys	Phe	Asp	His	Ala	Ala	Gly	Thr	Ser	Tyr	Val	Val	Gly	Glu	Thr	Trp
1				5				10					15		
Glu	Lys	Pro	Tyr	Gln	Gly	Trp	Met	Met	Val	Asp	Cys	Thr	Cys	Leu	Gly
			20				25					30			
Glu	Gly	Ser	Gly	Arg	Ile	Thr	Gly	Thr	Ser	Arg	Asn	Arg			
			35				40					45			

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<213> Homo sapiens

<400> 26

Cys	Asn	Asp	Gln	Asp	Thr	Arg	Thr	Ser	Tyr	Arg	Ile	Gly	Asp	Thr	Trp
1				5				10					15		
Ser	Lys	Lys	Asp	Asn	Arg	Gly	Asn	Leu	Gln	Cys	Ile	Cys	Thr	Gly	
			20				25					30			
Asn	Gly	Arg	Gly	Glu	Trp	Lys	Cys	Glu	Arg						
			35				40								

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<400> 27
His Thr Ser Val Gln Thr Thr Ser Ser Gly Ser Gly Pro Phe Thr Asp
1 5 10 15
Val Arg Ala Ala Val Tyr Gln Pro Gln Pro His Pro Gln Pro Pro Pro
20 25 30
Tyr Gly His
35

<210> 28
<211> 37
<212> PRT
<213> Homo sapiens

<400> 28
Cys Val Thr Asp Ser Gly Val Val Tyr Ser Val Gly Met Gln Trp Leu
1 5 10 15
Lys Thr Gln Gly Asn Lys Gln Met Leu Cys Thr Cys Leu Gly Asn Gly
20 25 30
Val Ser Cys Gln Glu
35

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<400> 29
Thr Ala Val Thr Gln Thr Tyr Gly Gly Asn Ser Asn Gly Glu Pro Cys
1 5 10 15
Val Leu Pro Phe Thr Tyr Asn Asp Arg Thr Asp Ser Thr Thr Ser Asn
20 25 30
Tyr Glu Gln Asp Gln Lys Tyr Ser Phe Cys Thr Asp His
35 40 45

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Thr Val Leu Val Gln Thr Arg Gly Gly Asn Ser Asn Gly Ala Leu Cys
1 5 10 15
His Phe Pro Phe Leu Tyr Asn Asn His Asn Tyr Thr Asp Cys Thr Ser
20 25 30
Glu Gly Arg Arg Asp Asn Met Lys Trp Cys Gly Thr Thr Gln Asn Tyr
35 40 45
Asp Ala Asp Gln Lys Phe Gly Phe Cys Pro Met Ala Ala His Glu Glu

50
Ile
65

55

60

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<400> 31
Cys Thr Thr Asn Glu Gly Val Met Tyr Arg Ile Gly Asp Gln Trp Asp
1 5 10 15
Lys Gln His Asp Met Gly His Met Met Arg Cys Thr Cys Val Gly Asn
20 25 30
Gly Arg Gly Glu Trp Thr Cys Ile Ala Tyr Ser Gln Leu Arg Asp Gln
35 40 45

<210> 32
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<400> 32
Cys Ile Val Asp Asp Ile Thr Tyr Asn Val Asn Asp Thr Phe His Lys
1 5 10 15
Arg His Glu Glu Gly His Met Leu Asn Cys Thr Cys Phe Gly Gln Gly
20 25 30
Arg Gly Arg Trp Lys Cys Asp Pro Val Asp Gln
35 40

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<400> 33
Cys Gln Asp Ser Glu Thr Gly Thr Phe Tyr Gln Ile Gly Asp Ser Trp
1 5 10 15
Glu Lys Tyr Val His Gly Val Arg Tyr Gln Cys Tyr Cys Tyr Gly Arg
20 25 30
Gly Ile Gly Glu Trp His Cys Gln Pro Leu Gln Thr Tyr Pro Ser Ser
35 40 45

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Ser Gly Pro Val Glu Val Phe Ile Thr Glu Thr Pro Ser Gln Pro Asn
1 5 10 15
Ser His Pro Ile Gln Trp Asn Ala Pro Gln Pro Ser His Ile Ser Lys
20 25 30

Tyr Ile Leu Arg Trp Arg Pro
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<400> 36
Val Ser
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<210> 37
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Ser Tyr Gln Phe
1

<210> 38
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<400> 38
Trp Phe Leu Phe Phe Pro Ala Phe Glu Pro Thr Thr Leu Ile Asn Tyr
1 5 10 15
Ser Tyr Ser Ile Tyr Tyr Ile Cys Leu Val Asn Lys Gln Tyr Val Val
20 25 30
Asn

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<212> PRT
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<400> 39
Ile Asp Leu
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<400> 40
Thr Glu Lys Lys Lys Lys Lys Lys
1 5

<210> 41
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<400> 41
Val Ser Ile Pro Pro Arg Asn Leu Gly Tyr
1 5 10